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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/694,452	10/23/2000	Michael Thomas Brady	BLD9-2000-0056US1	9596

7590 09/30/2004

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EXAMINER	
NGO, CHUONG D	

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 09/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/694,452	BRADY ET AL.	
	Examiner	Art Unit	
	Chuong D Ngo	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-49 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Babkin (5,642,438) in view of Mattela et al. (5,781,239).

As per claims 1-11 and 36-49, Babkin discloses in claim 1 a method for compressing image data by discrete cosine transform including a scaled transform equations (col. 20, lines 1-10) which can be seen as being arranged into 3 collections, each having at least two transform equation with at least two transform constants (the first collection including the first two rows of the matrix corresponding to F(0) and F(4), the second collection including the next two rows of the matrix corresponding to F(2) and F(6), and the third collection including the last four rows of the matrix corresponding to F(1), F(3), F(5) and F(7)). Each of the collection, according to Eqs. (2), set (3), set (4), set (6) and col. 8, lines 13-30, is obtained by independently scaling the corresponding transform equations in Eq. set (4) by a scaling term which is a transform constant within the collection (scaling term α for the first collection, δ for the second collection, and v for the third collection). It is noted that Babkin does not specifically discloses the scaled transform constants represented by sums of powers of 2. However, Mattela el al. suggests in col. 15, lines 60 - col. 16 line 18, the representations of the scaled transform constants by sums of powers of 2 in order to perform multiplications by simple shift/add operations. Thus it would have been obvious to a person of ordinary skill in the art to represent the scaled transform constants of Babkin by sums of powers of 2 for performing multiplications by simple shift/add operations as taught by Mattela et al. in order to reduce circuitry and processing time.

As per claims 13-35, it is noted the combination of Babkin and Mattela et al. does not disclose a use of the data compression in a data printer. However, since the use of data transform for data compression in a data printer is well-known in the art, a person of ordinary skill in the art would have found it an obvious application to use the data compression as taught by Babkin in a data printer as claimed in order to reduce circuitry and processing time.

2. Claims 1-49 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Babkin (5,642,438) in view of Dierke (5,854,757).

As per claims 1-11 and 36-49, Babkin discloses in claim 1 a method for compressing image data by discrete cosine transform including a scaled transform equations (col. 20, lines 1-10) which can be seen as being arranged into 3 collections, each having at least two transform equation with at least two transform constants (the first collection including the first two rows of the matrix corresponding to F(0) and F(4), the second collection including the next two rows of the matrix corresponding to F(2) and F(6), and the third collection including the last four rows of the matrix corresponding to F(1), F(3), F(5) and F(7)). Each of the collection, according to Eqs. (2), set (3), set (4), set (6) and col. 8, lines 13-30, is obtained by independently scaling the corresponding transform equations in Eq. set (4) by a scaling term which is a transform constant within the collection (scaling term α for the first collection, δ for the second collection, and v for the third collection). It is noted that Babkin does not specifically discloses the scaled transform constants represented by sums of powers of 2. However, Dierke suggests in col. 6, lines 19 - col. 715, line 18, the representations of the scaled transform constants by sums of powers of 2 in order to perform multiplication/division by simple shift/add operations. Thus it would have

been obvious to a person of ordinary skill in the art to represent the scaled transform constants of Babkin by sums of powers of 2 for performing multiplication/division by simple shift/add operations as taught by Dierke in order to reduce circuitry and processing time.

As per claims 13-35, it is noted the combination of Babkin and Dierke does not disclose a use of the data compression in a data printer. However, since the use of data transform for data compression in a data printer is well-known in the art, a person of ordinary skill in the art would have found it an obvious application to use the data compression as taught by Babkin in a data printer as claimed in order to reduce circuitry and processing time.

3. Applicant's arguments filed on 06/14/2006 have been fully considered but they are not persuasive.

It is respectfully submitted that according to Eq. set (3) and col. 8, lines 13-30, α, δ and v clearly represent scaling constants. Further, The scaled transform equations (col. 20, lines 1-10) can be seen as being arranged into 3 collections based on the scaling constants and as set forth in col. 8, lines 13-30, (the first collection including the first two rows of the matrix corresponding to F(0) and F(4), the second collection including the next two rows of the matrix corresponding to F(2) and F(6), and the third collection including the last four rows of the matrix corresponding to F(1), F(3), F(5) and F(7)). The transform in col. 20, lines 1-10 clearly equals to the transform in Eq. set (4) scaled by $\alpha/2$ for the first collection, $\delta/2$ for the second collection and v/2 for the third collection. Note: eq. set (6) define the values for B,G,L and M. In addition, since each of the equations (row) in the scaled transform contains at least one scaled transform constant having a value of 1, the scaling terms are clearly equal to at least one discrete cosine transform constant

in the corresponding collection, otherwise, there would be no scaled transform constant having a value of 1 in the scaled transform. Accordingly, it is respectfully submitted that the rejections as set forth above are proper.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

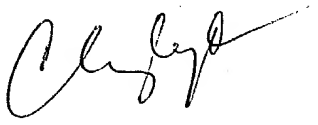
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong D Ngo whose telephone number is (703) 305-9764. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 309-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chuong D Ngo
Primary Examiner
Art Unit 2124

09-23-2004